

SEQUENCE LISTING

<110> Armour, Christopher  
Castle, John  
Garrett-Engelle, Philip  
Johnson, Jason

<120> ALTERNATIVELY SPLICED ISOFORMS OF HUMAN PHKA2

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<151> 2002-09-03

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<170> PatentIn version 3.2

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Tyr Ser Ile Leu Ala Val Trp Gly Leu Gly Met Ala Tyr Arg Lys Asn  
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Val Val Lys Leu Met Arg Gly Leu Leu Gln Cys Met Met Arg Gln Val  
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Ala Lys Val Glu Lys Phe Lys His Thr Gln Ser Thr Lys Asp Ser Leu  
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Lys Asn Pro His Thr Val Asp Arg Val Pro Met Gly Lys Val Pro His  
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Ser Val Lys Pro Asp Val Val Gln Val Thr Val Leu Ala Glu Asn  
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Asn His Ile Lys Asp Leu Leu Arg Lys His Gly Val Asn Val Gln Ser  
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Ile Ala Asp Ile His Pro Ile Gln Val Gln Pro Gly Arg Ile Leu Ser  
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His Ile Tyr Ala Lys Leu Gly Arg Asn Lys Asn Met Asn Leu Ser Gly  
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Arg Pro Tyr Arg His Ile Gly Val Leu Gly Thr Ser Lys Leu Tyr Val  
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Val Val Lys Leu Met Arg Gly Leu Leu Gln Cys Met Met Arg Gln Val  
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Ala Lys Val Glu Lys Phe Lys His Thr Gln Ser Thr Lys Asp Ser Leu  
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His Ala Lys Tyr Asn Thr Ala Thr Cys Gly Thr Val Val Gly Asp Asp  
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Gly Arg Tyr Gly Cys Cys Arg Phe Leu Arg Asp Gly Tyr Lys Thr Pro  
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Val Pro Glu Leu Tyr Ala Val Pro Pro Asn Lys Val Asp Glu Glu Tyr  
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Lys Asn Pro His Thr Val Asp Arg Val Pro Met Gly Lys Val Pro His  
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Leu Trp Gly Gln Ser Leu Tyr Ile Leu Ser Ser Leu Leu Ala Glu Gly  
405 410 415

Phe Leu Ala Ala Gly Glu Ile Asp Pro Leu Asn Arg Arg Phe Ser Thr  
420 425 430

Ser Val Lys Pro Asp Val Val Val Gln Val Thr Val Leu Ala Glu Asn  
435 440 445

Asn His Ile Lys Asp Leu Leu Arg Lys His Gly Val Asn Val Gln Ser  
450 455 460

Ile Ala Asp Ile His Pro Ile Gln Val Gln Pro Gly Arg Ile Leu Ser  
465 470 475 480

His Ile Tyr Ala Lys Leu Gly Arg Asn Lys Asn Met Asn Leu Ser Gly  
485 490 495

Arg Pro Tyr Arg His Ile Gly Val Leu Gly Thr Ser Lys Leu Tyr Val  
500 505 510

Ile Arg Asn Gln Ile Phe Thr Phe Thr Pro Gln Phe Thr Asp Gln His  
515 520 525

His Phe Tyr Leu Ala Leu Asp Asn Glu Met Ile Val Glu Met Leu Arg  
530 535 540

Ile Glu Leu Ala Tyr Leu Cys Thr Cys Trp Arg Met Thr Gly Arg Pro  
545 550 555 560

Thr Leu Thr Phe Pro Ile Ser Arg Thr Met Leu Ser Asn Ser Arg Asp  
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Val

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<212> DNA  
<213> Homo sapiens

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gaagaccgccc atgtcttcag tgctatccac tccacgcggg acataacttgc tgtgatggca 480  
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gaaagtgact ttcaatggcc cagagatgac catggtgacg tggactgtga gaagctgggtt 660  
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<400> 8

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Tyr	Phe	Gly	Gly	Ala	Arg	Val	Lys	Leu	Gly	Asn	Leu	Ser	Glu	Phe	Leu
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Thr	Thr	Ser	Phe	Tyr	Thr	Tyr	Leu	Thr	Phe	Leu	Asp	Pro	Asp	Cys	Asp
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Glu	Lys	Leu	Phe	Asp	Asn	Ala	Ser	Glu	Gly	Thr	Phe	Ser	Pro	Asp	Ser
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															90
Asp	Ser	Asp	Leu	Val	Gly	Tyr	Leu	Glu	Asp	Thr	Cys	Asn	Gln	Glu	Ser
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Gln	Asp	Glu	Leu	Asp	His	Tyr	Ile	Asn	His	Leu	Leu	Gln	Ser	Thr	Ser
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Leu	Arg	Ser	Tyr	Leu	Pro	Pro	Leu	Cys	Lys	Asn	Thr	Glu	Asp	Arg	His
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Val	Phe	Ser	Ala	Ile	His	Ser	Thr	Arg	Asp	Ile	Leu	Ser	Val	Met	Ala
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Gln	Pro	Leu	Leu	Glu	Lys	Val	Pro	Glu	Ser	Asp	Phe	Gln	Trp	Pro	Arg
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Asp	Asp	His	Gly	Asp	Val	Asp	Cys	Glu	Lys	Leu	Val	Glu	Gln	Leu	Lys
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Asp	Cys	Ser	Asn	Leu	Gln	Asp	Gln	Ala	Asp	Ile	Leu	Tyr	Ile	Leu	Tyr
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Asn Gln Glu Trp Gly Leu Ile Arg Tyr Ile Ser Gly Leu Leu Arg Lys  
275 280 285

Lys Val Glu Val Leu Ala Glu Ala Cys Thr Asp Leu Leu Ser His Gln  
290 295 300

Lys Gln Leu Thr Val Gly Leu Pro Pro Glu Pro Arg Glu Lys Ile Ile  
305 310 315 320

Ser Ala Pro Leu Pro Pro Glu Glu Leu Thr Lys Leu Ile Tyr Glu Ala  
325 330 335

Ser Gly Gln Asp Ile Ser Ile Ala Val Leu Thr Gln Glu Ile Val Val  
340 345 350

Tyr Leu Ala Met Tyr Val Arg Ala Gln Pro Ser Leu Phe Val Glu Met  
355 360 365

Leu Arg Leu Arg Ile Gly Leu Ile Ile Gln Val Met Ala Thr Glu Leu  
370 375 380

Ala Arg Ser Leu Asn Cys Ser Gly Glu Glu Ala Ser Glu Ser Leu Met  
385 390 395 400

Asn Leu Ser Pro Phe Asp Met Lys Asn Leu Leu His His Ile Leu Ser  
405 410 415

Gly Lys Glu Phe Gly Val Glu Arg Ser Val Arg Pro Ile His Ser Ser  
420 425 430

Thr Ser Ser Pro Thr Ile Ser Ile His Glu Val Gly His Thr Gly Val  
435 440 445

Thr Lys Thr Glu Arg Ser Gly Ile Asn Arg Leu Arg Ser Glu Met Lys  
450 455 460

Gln Met Thr Arg Arg Phe Ser Ala Asp Glu Gln Phe Phe Ser Val Gly  
465 470 475 480

Gln Ala Ala Ser Ser Ser Ala His Ser Ser Lys Ser Ala Arg Ser Ser  
485 490 495

Thr Pro Ser Ser Pro Thr Gly Thr Ser Ser Ser Asp Ser Gly Gly His  
500 505 510

His Ile Gly Trp Gly Glu Arg Gln Gly Gln Trp Leu Arg Arg Arg Arg  
515 520 525

Leu Asp Gly Ala Ile Asn Arg Val Pro Val Gly Phe Tyr Gln Arg Val  
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Trp Lys Ile Leu Gln Lys Cys His Gly Leu Ser Ile Asp Gly Tyr Val  
545 550 555 560

Leu Pro Ser Ser Thr Thr Arg Glu Met Thr Pro His Glu Ile Lys Phe  
565 570 575

Ala Val His Val Glu Ser Val Leu Asn Arg Val Pro Gln Pro Glu Tyr  
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Arg Gln Leu Leu Val Glu Ala Ile Met Val Leu Thr Leu Leu Ser Asp  
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Thr Glu Met Thr Ser Ile Gly Gly Ile Ile His Val Asp Gln Ile Val  
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Gln Met Ala Ser Gln Leu Phe Leu Gln Asp Gln Val Ser Ile Gly Ala  
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Met Asp Thr Leu Glu Lys Asp Gln Ala Thr Gly Ile Cys His Phe Phe  
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Tyr Asp Ser Ala Pro Ser Gly Ala Tyr Gly Thr Met Thr Tyr Leu Thr  
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Gln Met Gln  
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<212> PRT  
<213> Homo sapiens

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Leu	Ser	Ala	Ser	His	Glu	Gln	Lys	Asp	Ala	Trp	Val	Arg	Asp	Asn	Ile
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Tyr	Ser	Ile	Leu	Ala	Val	Trp	Gly	Leu	Gly	Met	Ala	Tyr	Arg	Lys	Asn
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Ala	Asp	Arg	Asp	Glu	Asp	Lys	Ala	Lys	Ala	Tyr	Glu	Leu	Glu	Gln	Asn
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Val	Val	Lys	Leu	Met	Arg	Gly	Leu	Leu	Gln	Cys	Met	Met	Arg	Gln	Val
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Ala	Lys	Val	Glu	Lys	Phe	Lys	His	Thr	Gln	Ser	Thr	Lys	Asp	Ser	Leu
								100		105		110			

His	Ala	Lys	Tyr	Asn	Thr	Ala	Thr	Cys	Gly	Thr	Val	Val	Gly	Asp	Asp
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Gln	Trp	Gly	His	Leu	Gln	Val	Asp	Ala	Thr	Ser	Leu	Phe	Leu	Leu	Phe
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Glu Val Ala Phe Ile Gln Asn Leu Val Phe Tyr Ile Glu Ala Ala Tyr  
165 170 175

Lys Val Ala Asp Tyr Gly Met Trp Glu Arg Gly Asp Lys Thr Asn Gln  
180 185 190

Gly Ile Pro Glu Leu Asn Ala Ser Ser Val Gly Met Ala Lys Ser Ile  
195 200 205

Leu Phe Ser Met Leu Pro Arg Ala Ser Thr Ser Lys Glu Ile Asp Ala  
210 215 220

Gly Leu Leu Ser Ile Ile Ser Phe Pro Ala Phe Ala Val Glu Asp Val  
225 230 235 240

Asn Leu Val Asn Val Thr Lys Asn Glu Ile Ile Ser Lys Leu Gln Gly  
245 250 255

Arg Tyr Gly Cys Cys Arg Phe Leu Arg Asp Gly Tyr Lys Thr Pro Arg  
260 265 270

Glu Asp Pro Asn Arg Leu His Tyr Asp Pro Ala Glu Leu Lys Leu Phe  
275 280 285

Glu Asn Ile Glu Cys Glu Trp Pro Val Phe Trp Thr Tyr Phe Ile Ile  
290 295 300

Asp Gly Val Phe Ser Gly Asp Ala Val Gln Val Gln Glu Tyr Arg Glu  
305 310 315 320

Ala Leu Glu Gly Ile Leu Ile Arg Gly Lys Asn Gly Ile Arg Leu Val  
325 330 335

Pro Glu Leu Tyr Ala Val Pro Pro Asn Lys Val Asp Glu Glu Tyr Lys  
340 345 350

Asn Pro His Thr Val Asp Arg Val Pro Met Gly Lys Val Pro His Leu  
355 360 365

Trp Gly Gln Ser Leu Tyr Ile Leu Ser Ser Leu Leu Ala Glu Gly Phe  
370 375 380

Leu Ala Ala Gly Glu Ile Asp Pro Leu Asn Arg Arg Phe Ser Thr Ser  
385 390 395 400

Val Lys Pro Asp Val Val Val Gln Val Thr Val Leu Ala Glu Asn Asn  
405 410 415

His Ile Lys Asp Leu Leu Arg Lys His Gly Val Asn Val Gln Ser Ile  
420 425 430

Ala Asp Ile His Pro Ile Gln Val Gln Pro Gly Arg Ile Leu Ser His  
435 440 445

Ile Tyr Ala Lys Leu Gly Arg Asn Lys Asn Met Asn Leu Ser Gly Arg  
450 455 460

Pro Tyr Arg His Ile Gly Val Leu Gly Thr Ser Lys Leu Tyr Val Ile  
465 470 475 480

Arg Asn Gln Ile Phe Thr Phe Thr Pro Gln Phe Thr Asp Gln His His  
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Phe Tyr Leu Ala Leu Asp Asn Glu Met Ile Val Glu Met Leu Arg Ile  
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Glu Leu Ala Tyr Leu Cys Thr Cys Trp Arg Met Thr Gly Arg Pro Thr  
515 520 525

Leu Thr Phe Pro Ile Ser Arg Thr Met Leu Thr Asn Asp Gly Ser Asp  
530 535 540

Ile His Ser Ala Val Leu Ser Thr Ile Arg Lys Leu Glu Asp Gly Tyr  
545 550 555 560

Phe Gly Gly Ala Arg Val Lys Leu Gly Asn Leu Ser Glu Phe Leu Thr  
565 570 575

Thr Ser Phe Tyr Thr Tyr Leu Thr Phe Leu Asp Pro Asp Cys Asp Glu  
580 585 590

Lys Leu Phe Asp Asn Ala Ser Glu Gly Thr Phe Ser Pro Asp Ser Asp  
595 600 605

Ser Asp Leu Val Gly Tyr Leu Glu Asp Thr Cys Asn Gln Glu Ser Gln  
610 615 620

Asp Glu Leu Asp His Tyr Ile Asn His Leu Leu Gln Ser Thr Ser Leu  
625 630 635 640

Arg Ser Tyr Leu Pro Pro Leu Cys Lys Asn Thr Glu Asp Arg His Val  
645 650 655

Phe Ser Ala Ile His Ser Thr Arg Asp Ile Leu Ser Val Met Ala Lys  
660 665 670

Ala Lys Gly Leu Glu Val Pro Phe Val Pro Met Thr Leu Pro Thr Lys  
675 680 685

Val Leu Ser Ala His Arg Lys Ser Leu Asn Leu Val Asp Ser Pro Gln  
690 695 700

Pro Leu Leu Glu Lys Val Pro Glu Ser Asp Phe Gln Trp Pro Arg Asp  
705 710 715 720

Asp His Gly Asp Val Asp Cys Glu Lys Leu Val Glu Gln Leu Lys Asp  
725 730 735

Cys Ser Asn Leu Gln Asp Gln Ala Asp Ile Leu Tyr Ile Leu Tyr Val  
740 745 750

Ile Lys Gly Pro Ser Trp Asp Thr Asn Leu Ser Gly Gln His Gly Val  
755 760 765

Thr Val Gln Asn Leu Leu Gly Glu Leu Tyr Gly Lys Ala Gly Leu Asn  
770 775 780

Gln Glu Trp Gly Leu Ile Arg Tyr Ile Ser Gly Leu Leu Arg Lys Lys  
785 790 795 800

Val Glu Val Leu Ala Glu Ala Cys Thr Asp Leu Leu Ser His Gln Lys  
805 810 815

Gln Leu Thr Val Gly Leu Pro Pro Glu Pro Arg Glu Lys Ile Ile Ser  
820 825 830

Ala Pro Leu Pro Pro Glu Glu Leu Thr Lys Leu Ile Tyr Glu Ala Ser  
835 840 845

Gly Gln Asp Ile Ser Ile Ala Val Leu Thr Gln Glu Ile Val Val Tyr  
850 855 860

Leu Ala Met Tyr Val Arg Ala Gln Pro Ser Leu Phe Val Glu Met Leu  
865 870 875 880

Arg Leu Arg Ile Gly Leu Ile Ile Gln Val Met Ala Thr Glu Leu Ala  
885 890 895

Arg Ser Leu Asn Cys Ser Gly Glu Glu Ala Ser Glu Ser Leu Met Asn  
900 905 910

Leu Ser Pro Phe Asp Met Lys Asn Leu Leu His His Ile Leu Ser Gly  
915 920 925

Lys Glu Phe Gly Val Glu Arg Ser Val Arg Pro Ile His Ser Ser Thr  
930 935 940

Ser Ser Pro Thr Ile Ser Ile His Glu Val Gly His Thr Gly Val Thr  
945 950 955 960

Lys Thr Glu Arg Ser Gly Ile Asn Arg Leu Arg Ser Glu Met Lys Gln  
965 970 975

Met Thr Arg Arg Phe Ser Ala Asp Glu Gln Phe Phe Ser Val Gly Gln  
980 985 990

Ala Ala Ser Ser Ser Ala His Ser Ser Lys Ser Ala Arg Ser Ser Thr  
995 1000 1005

Pro Ser Ser Pro Thr Gly Thr Ser Ser Ser Asp Ser Gly Gly His  
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His Ile Gly Trp Gly Glu Arg Gln Gly Gln Trp Leu Arg Arg Arg  
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Arg Leu Asp Gly Ala Ile Asn Arg Val Pro Val Gly Phe Tyr Gln  
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Arg Val Trp Lys Ile Leu Gln Lys Cys His Gly Leu Ser Ile Asp  
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Gly Tyr Val Leu Pro Ser Ser Thr Thr Arg Glu Met Thr Pro His  
1070 1075 1080

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